IN THE ABSTRACT:

Please **substitute the attached Abstract** for that originally filed.

ABSTRACT

Coordinate positions of four points, including three position detecting element patterns and an indexing pattern, are detected from a captured two-dimensional code image. The two-dimensional code size is determined, and coefficients of equations are determined for determining coordinate positions corresponding to center positions of respective cells compensated for inclination of the image by adding depth information. The coordinate positions of respective cell center positions are determined according to the calculation equations by applying the determined coefficients. Brightness/darkness is discriminated from image data corresponding to the respective cell center positions, and binary data (0 or 1) for respective cells are generated Two-dimensional code information is reproduced based on the binary data. The equations are expressed by recurrence formulas. The coefficients determined from the coordinate positions of 4 four points of the two-dimensional code are divided by the same constant to make them integers.